

- Fig. 7. *Retepora plana*, Hincks: portion of the front surface, magnified.  
 Fig. 8. The same: portion of the dorsal surface, magnified.  
 Fig. 9. *Retepora robusta*, Hincks: a fragment of the zoarium, natural size.  
 Fig. 10. The same: portion of the front surface, magnified.

PLATE XIX.

- Fig. 1. *Retepora monilifera*, Macgillivray: zooecia, magnified.  
 Fig. 2. The same: a zooecium in an earlier stage.  
 Fig. 3. One of the oral spines, magnified.  
 Fig. 4. One of the gigantic avicularia, magnified.  
 Fig. 5. Large elliptical avicularium, magnified.  
 Fig. 6. *Retepora prætenuis*, Hincks: portion of the front surface, magnified.  
 Fig. 7. The same: portion of the zoarium, magnified, showing the relative width of the fenestræ and the interspaces.  
 Fig. 8. Fragment of the zoarium, nat. size.  
 Fig. 9. *Retepora tessellata*, Hincks: front surface.  
 Fig. 10. The same: dorsal surface.  
 Fig. 11. The ooecium.  
 Fig. 12. Fragment of the zoarium, nat. size.  
 Fig. 13. ?*Retepora granulata*, Macgillivray: front surface.  
 Fig. 14. The ooecium.  
 Fig. 15. Two fenestræ magnified, showing the width of the interspace.

XLI.—*Descriptions of new Species of Heteropterous Hemiptera collected in the Hawaiian Islands by the Rev. T. Blackburn.*  
 —No. 2. By F. BUCHANAN WHITE, M.D., F.L.S.

HAVING received from Mr. Blackburn information as to the habits, localities, &c. (as well as more examples of some) of the species noticed in my former paper (vol. xx. p. 110), it will perhaps be as well to give notes on these species before describing certain new ones since received.

In my last paper I omitted to number the species, which I will now do.

1. *Geotomus subtristis*, Buchanan White.
2. *Geotomus jucundus*, Buchanan White.

Both widely distributed and pretty common, living under stones and about the roots of herbage, and not confined to the mountains.

3. *Triphleps persequens*, Buchanan White.

Three specimens only found.

4. *Cardiastethus mundulus*, Buchanan White.

Not rare about the outside of roofs of houses.

5. *Nabis innotatus*, Buchanan White.

The specimen from which the description was made appears to be a pale form; in others the dark markings of the pronotum are more distinct, and the centre of the scutellum, as well as the two spots near the apex of the first vein of the corium, which are so frequently present in species of the genus *Nabis*, are more or less fuscous. On the whole, however, the name "*innotatus*" is not amiss.

Taken commonly by sweeping, but chiefly on the higher ground.

6. *Nabis subrufus*, Buchanan White.

Rare. Three specimens taken singly under bark on the higher mountains.

7. *Nabis? lusciosus*, Buchanan White.

Appears to vary in the intensity of the markings.

Not very common. Taken by sweeping, and also under and about bark on the higher mountains. The bark-frequenting propensity of this and the preceding species is, I think, very unusual in the genus.

8. *Luteva insolida*, Buchanan White.

Common everywhere, on the lower ground, in December.

9. *Merragata hebroides*, Buchanan White.

On small stagnant pools formed by the temporary overflow of streams on the higher mountains. When the pools dry up, the insect frequents the holes where the water has been.

10. *Corixa Blackburni*, Buchanan White.

Very common in salt-water pools on the sea-shore. These pools are formed artificially for the manufacture of salt. As the liquid becomes more dense by evaporation, the *Corixæ* migrate to pools more recently filled. Some would appear, however, to remain too long, as, in the last stage of evaporation, the pools generally contain a few dead *Corixæ*. Mr. Blackburn has hitherto failed to find any freshwater species of this genus.

## Asopidæ.

11. *Æchalia patruelis*, Stål.

*Arma patruelis*, Stål, Freg. Eug. Resa, Ins. 220. 3.

This species, which has not been found elsewhere, is common on forest trees at no great elevation.

12. *Æchalia pacifica*, Stål.

*Arma pacifica*, Stål, l. c. 221. 4.

Like the last this is also peculiar to the Hawaiian Islands. Though widely distributed it is not common, and frequents trees on the mountains.

## Lygæidæ.

13. *Nysius Dallasi*, n. sp.

*N.* oblongus, testaceo-flavescens, pallido-sericans; capite vitta laterali utrinque intra oculos et marginibus angustissimis vittæ pallidæ centralis, rostri apice, pronoto intra marginem anticum et macula utrinque prope angulos posticos, scutelli basi, tarsorum articulo primo, tertio apice unguiculisque, sterno maculis nonnullis, ventre vitta laterali utrinque marginem haud attingente et testaceo-maculata nigricantibus; antennarum articulo primo ad apicem exteriore, secundo apice et tertio basi, margine antico angustissimo corii, femoribus anticis maculis parvis, et tibiis apice, fusco-brunneis; membrana albido-hyalina. Capite cum oculis quam pronoti apex latiore; antennis gracilibus; rostro metasternum attingente, articulo primo bucculis paullo longiore; bucculis dimidio capitis fere æquilongis, retrorsum sensim humilioribus et evanescentibus; pronoto apice quam basi brevior, longitudine quam latitudine paullo minore, sat rude punctato, lateribus, impressione lineari antica et vitta media lævigatis, utrinque intra angulos posticos elevatos oblique sulcato; scutello punctato sat fortiter triradiatim rugoso; elytris basi parallelis, dein ampliatis et rotundatis; pedibus gracilibus, tibiis apice paullo incrassatis, tarsis posticis longis articulo primo articulis duobus ultimis ad unum multo longiore; ventris segmentis 3 apicalibus fœminæ angulariter emarginatis.

♀. Long. 5, lat.  $1\frac{1}{2}$  m. m.

Not being closely allied to any of the species in Stål's 'Enumeratio,' its place is between that author's sections "a" and "aa."

This species (which I have much pleasure in dedicating to Mr. W. S. Dallas, the founder of the genus *Nysius*, and whose 'List of Hemiptera in the British Museum' is so useful to all students of this order of insects) occurs rarely amongst mixed herbage near the summit of a mountain-pass known as the "Pali," near Honolulu.

14. *Nysius delectus*, n. sp.

*N.* suboblongus, dilute flavescens-testaceus; antennarum articulo primo vitta externa et articulis 3 ultimis, rostri articulis 3 ultimis, capite (vitta centrali angustissima et tuberculis antenniferis exceptis), pronoto intra marginem anticum, punctis in disco, macula triangulari utrinque prope angulos posticos necnon margine

postico ante scutellum, scutello (lateribus apiceque exceptis), corii margine antico angustissimo, lineis interruptis ad venas, maculis nonnullis in disco, et margine apicali plus minus interrupto, clavi sutura commissuraque, femorum maculis sæpe confluentibus præsertim superne, tibiarum basi apice et linea angustissima ad marginem anticum, tarsorum articulo primo apice et articulo tertio unguiculisque, sterno (incisuris exceptis), abdominis marginibus posticis segmentorum 3 ultimorum saltem in medio, genitalibusque nigris vel piceo-nigris; antennarum articulo secundo apice imo pallido et articulo tertio apice dilutiore; oculis rufo-brunneis; membrana albedo-hyalina. Capite cum oculis apice pronoti latiore, dense pallido-sericante; antennis sat gracilibus, articulo secundo tertio longiore, tertio quartoque æquilongis; rostro metasternum attingente, articulo primo bucculas superante; bucculis fere dimidio capitis æquilongis, retrorsum sensim humilioribus et evanescentibus; pronoto pallido-sericante rude punctato, vitta media, impressione lineari antica, lateribus, et angulis posticis lævigatis, sat brevi, margine antico quam margo posticus  $\frac{1}{4}$  brevior, longitudine quam latitudo postica disincte minore, margine postico utrinque intra angulos posticos elevatos sulca obliqua instructo; scutello pallido-sericante et rude punctato, ruga sat elevata lævigata; elytris parce sericantibus, basi parallelis, dein ampliatio-dilatatis et sensim rotundatis; tibiis apice clavatis, tarsorum articulis primo tertioque apice incrassatis; margine exteriori calloso orificiorum auriculato-prominulo; ventris segmentis 3 ultimis fœminæ angulariter emarginatis; sterno ventrique dense pallido-sericantibus.

♂ et ♀. Long. 5-6, lat. 2-2 $\frac{1}{2}$  m. m.

Somewhat allied to the preceding species, which, however, differs in its more slender form, longer and more graceful antennæ and legs, as well as in the coloration.

Widely distributed (but not very common) on the mountains, and generally taken by beating.

### 15. *Nysius arboricola*, n. sp.

*N.* oblongus, testaceus, nitidus, glaber; capite, rostri apice, vitta laterali utrinque, corpore subtus, scutelli basi lateribusque nigris; antennis totis dilute et articuli primi maculis obscurioribus, rostro apicem versus, oculis, callis transversis intra marginem anticum pronoti et angulis posticis, scutelli ruga callosa (apice imo excepto), corii venis, maculis 2 magnis triangularibus ad marginem apicalem et apice, femorum maculis nonnullis, tibiis apice imo, et tarsorum articulis apice plus minus brunneis vel fusco-brunneis; orificiis et maculis connexivi rufo-flavidis; membrana albedo-hyalina. Capite ruguloso, cum oculis pronoti apice paullo latiore; antennis sat brevibus rostro brevioribus, articulo secundo tertio longiore; rostro metasternum attingente, articulo primo bucculis subæquilongo; bucculis basin capitis fere attingentibus, pone

medium retrorsum sensim humilioribus; pronoto rude punctato, callo transverso antico et angulis posticis subelevatis lævigatis, margine antico quam margo posticus paullo brevior, longitudine quam latitudo postica  $\frac{1}{4}$  minore; scutello fortiter triradiatim callosorugoso, ad latera punctato; elytris fere a basi sensim rotundatis et subampliatis, sutura clavi distincte biseriatis punctata; pedibus subcrassis, tibiis apice et tarsorum articulis subclavatis.

♀. Long. 4, lat.  $1\frac{1}{4}$  m. m.

Apparently allied in some respects to *N. helveticus*, H.-S. As yet rare, only two specimens having been taken. These were beaten from trees (one in May, the other in July), some miles apart, high up in the mountainous district.

### 16. *Nysius cœnosulus*, Stål.

*Nysius cœnosulus*, Stål, l. c. 243. 59.

The specimens which I refer to this species do not altogether agree with Stål's description, as the scutellum is only black in part, the apex of the second joint of the antennæ and the inner vein of the corium are not markedly dark, the mesosternum is sulcate, and the whole animal is more hairy. Still I think that they are properly referred here. *N. cœnosulus* is peculiar to the Hawaiian Islands.

Rather common on and about a small plant that grows in sandy places on the sea-shore.

### 17. *Pamera nigriceps*, Dall.

*Rhyparochromus nigriceps*, Dall. List, ii. 577. 47.

A common species on low plants and under stones &c., but not occurring below about 1000 feet above sea-level. This species is reported also from the Philippine Islands, Taiti, and New Zealand. The last-mentioned locality is on the authority of Dr. Mayr ('Novara' Hemiptera, p. 128); and I think it is just possible that a mistake may have occurred, though Dr. Mayr is so good a hemipterologist that I have much hesitation in suggesting this. The reasons I have for thinking there may be a mistake are these:—Dr. Mayr records *nigriceps* from New Zealand under the name *Plociomerus nigriceps*, with the remark that it seems to unite the characters of both *Paromius* and *Plociomerus*. *Paromius*, it may be mentioned, is synonymic with *Pamera* in part. Now there is a New-Zealand *Plociomerus* (which I have described under the name *P. Douglasi*) which very much resembles *Pamera nigriceps*, and which, if Dr. Mayr had only Mr. Dallas's description of the latter species (written when it alone was known) before him, it is not difficult to imagine that a mis-

take may have occurred. *Nigriceps*, however, distinctly belongs to *Pamera*, and *Douglasi* to *Plociomerus*. *Plociomerus Douglasi* is, moreover, a smaller and a darker-coloured insect.

### 18. *Clerada apicicornis*, Sign.

*Clerada apicicornis*, Sign. in Maillard, Notes sur l'île de la Réunion, Ins. 28, pl. 20. 8.

Taken by beating dead branches of a species of palm in mountain forests. This insect is rather widely distributed, occurring in Réunion, Bengal, Celebes, Cuba, and Venezuela. It is now recorded for the first time as a native of the Hawaiian Islands. In Walker's catalogue it is described from Celebes under the name *Gastrodes terminalis*; or, at least, the species so named is not separable by the description from *Clerada apicicornis*.

### RECLADA, gen. nov.

Corpus anguste ovatum, depressum. Caput porrectum, thoraci fere æquilongum, ad oculos haud immersum, parte postoculari cylindrica, utrinque pone oculos ocellos ferente. Bucculæ elevatæ. Rostrum pedes anticos attingens, articulis primo et secundo ad unum parti anteculari capitis subæquilongis, articulo secundo primo brevior. Antennæ articulo primo capite brevior, hujus apicem tamen superante. Pronotum transversum, trapezoideum, antorsum angustatum, marginibus lateralibus acutis reflexis, medio levissime sinuatis, margine basali recto. Scutellum triangulare subæquilaterum, commissura clavi fere duplo longius. Hemelytra completa, margine costali leviter rotundato, margine apicali in medio sinuato deinde sensim sed distincte ad apicem commissuræ rotundato. Membranæ venæ haud bene discretæ. Pedes mediocres, femoribus inermibus, anticis vix incrassatis, tarsis posticis articulo primo apicalibus duobus simul sumptis longitudine fere æquali.

Genus *Cleradæ* Sign. maxime affine, structura rostri et hemelytrorum distinctum.

### 19. *Reclada mæsta*, n. sp.

*R.* obscure ferruginea, supra subtusque distincte et dense punctata; rostro, tarsis, membranaque pallidioribus; corii maculis in disco et ad marginem apicalem indistincte fuscis.

♂. Long.  $3\frac{1}{2}$ , lat.  $1\frac{3}{4}$  m. m.

Rare. Circumstances of capture unfortunately not noted.

### METRARGA, gen. nov.

Corpus ovato-oblongum, supra planum, subtus convexum. Caput subquadrilaterum, fere ad oculos immersum, antice compressum,

vertice valde convexo-elevato. Oculi parvi, retrorsum curvati. Ocelli prope basin capitis siti. Rostrum pedes posticos attingens, articulo primo capiti æquilongo. Antennæ dimidio corporis æquilongæ; plus dimidio articuli primi apicem capitis superans; tubercula antennifera extus valde spinosa. Pronotum transversum, angulis anticis prominulis, marginibus lateralibus carinatis subacutis in medio sinuatis, angulis posticis callosoprominulis, basi fere recta. Scutellum paullo longius quam latius, leviter elevato-marginatum. Hemelytra completa, margine antico rotundato, explanato et subreflexo, margine apicali angulum interiorem versus fortiter sinuato, angulo exteriori producto. Pedes mediocres, coxis posticis haud remotis, femoribus inermibus vix incrassatis, tarsis posticis articulo primo duobus ultimis simul sumptis fere æquilongo. Ventris segmentorum omnium margines postici recti et latera attingentes, spiraculis tribus ultimis in ventre sitis, ceteris obscuris.

Type *M. nuda*, n. sp. Affinity doubtful.

#### 20. *Metrarga nuda*, n. sp.

*M. fusco-brunnea*, capillis brevissimis depressis parce vestita; pronoti linea centrali subelevata et angulis posticis, scutelli apice imo, pedibusque albido-testaceis, his piceo-nigro annulatis; antennis rostroque pallide rufo-brunneis, illis articulo primo basi apiceque et articulo secundo apice dilutioribus, hoc apice nigro; oculis rufo-brunneis; corii margine antico vitta latissima indeterminata irregulariter albido-testacco maculata, margine imo hine illinc piceo-notato; membrana fusca maculis plurimis parvis pallidis notata. Capite pronotoque dense et sat rude punctatis; tuberculis antenniferis extrorsum dente acuto instructis; antennarum gracilium articulo primo sat crasso leviter curvato, articulo tertio secundo paullo brevior, quarto fusiformi; pronoti linea media subelevata, impressione lineari antica et angulis posticis lævigatis, angulis anticis dentato-prominulis, lobo antico ad latera subdepresso, marginibus lateralibus in medio sinuato-emarginatis, margine antico quam basis paullo brevior; scutello fortiter punctato, apice lævigato, basi depresso, ruga longitudinali subelevata instructo; elytris apicem abdominis paullo superantibus dense sed subtiliter punctatis, membrana venis 5 instructis, vena quarta furcata; pedibus sat brevibus haud gracilibus; sterno rude punctato.

♂. Long. 8, lat. pone medium  $4\frac{1}{2}$  m. m.

Only two specimens found, and the circumstances of capture not noted.

#### 21. *Metrarga villosa*, n. sp.

*M. obovata*, testaceo-brunnea, villis brevibus depressis dilutioribus densissime vestita; capite nigro, clypeo et tuberculis antenniferis pallidis; antennarum articulo secundo rufo-brunneo basi apice-

que dilutioribus, tertio quartoque fusco-brunneis; rostro apice nigro; elytris irregulariter fusco-brunneo notatis, margine antico distinctius maculato; membrana fusca; pedibus albido-testaceis fusco-nigro annulatis, tarsis fusco-brunneis. Capite subtiliter punctato, tuberculis antenniferis extrorsum dente subobtusato armatis; antennarum articulo primo sat crasso, secundo tertioque subæquilongis, quarto fusiformi; pronoto subtiliter punctato, impressione lineari antica et angulis posticis lævigatis, marginibus lateralibus sinuatis antice elevatis, margine antico in medio calloso-tuberculato ad latera depresso, disco utrinque callo longitudinali instructo, basi apiceque fere æquilatis; scutello rude punctato, basi media depresso, ruga longitudinali elevata instructo; membrana parva apicem abdominis haud superante, pone apicem corii parum extensa, venis haud bene discretis; sterno punctato.

♂. Long. 5-5½, lat. pone medium 2½-3 m. m.

Apart from its villosity and smaller size, the different structure of the pronotum and of the membrane at once distinguishes this from the preceding species.

Not rare among rotten leaves &c. at the foot of a precipice on the mountains five or six miles from Honolulu.

#### Capsidæ.

##### 22. *Capsus pellucidus*, Stål.

*Capsus pellucidus*, Stål, l. c. 255. 92.

A common species, but peculiar to the Hawaiian Islands.

#### Anthocoridæ.

##### 23. *Cardiastethus sodalis*, n. sp.

*C. rufo-brunneus*, capillis pallidis vestitus; oculis et lobo postico pronoti nigro-piceis; antennis, pedibus elytris que luteo-brunneis; clavi apice cuneoque præsertim ad apicem brunneo-fuscis; antennarum articulis secundo apice, tertio quartoque, capite inter oculos, membranaque fuscis.

Long. circa 2½ m. m.

Rather closely allied to *C. rufescens*, Costa (= *testaceus*, Perris), which, however, is larger and differently coloured; much more closely related to *C. bicolor*, Buchanan White, from St. Helena. *C. bicolor*, however, is a shade larger, more evidently punctate and more thickly clothed with hair, and differs besides in the colour of the anterior lobe of the pronotum and scutellum and in the markings of the elytra.

Not very common, about the outside of the roofs of houses in company with *C. mundulus*.



**Acanthiidaæ.**24. *Acanthia lectularia*, L.

An introduced species, and far too common.

**Saldidæ.**25. *Salda exulans*, n. sp.

*S. nigra*, subnitida, brevissime nigro-griseo pubescens; maculis 2 parvis anticis capitis, rostro, antennarum articulo basali (apice excepto), pronoti marginibus angustis lateralibus (margine imo et angulis posticis exceptis), marginibus acetabulorum pedibusque (coxis basi, femoribus tibiisque apice exceptis), clavi macula pone medium, corii margine antico lato, maculis 2 et linea longitudinali inter marginem et venam primam, illius interne linea ad dimidium apicale, maculis 3 et dimidio apicali marginis interioris, necnon membranæ areolis 3 exterioribus plus minus sordide brunneo-albidis. Capite quam apex pronoti latiore; pronoti latitudine postica quam longitudo media triplo majore, margine postico quam margo anticus plus duplo longiore, callo antico mediocri in medio foveolato, marginibus lateralibus rectis, margine postico late et sat profunde sinuato ante scutellum; scutelli depressione media mediocri; elytrorum margine antico distinctissime rotundato; membrana parva, areolis 4 instructa; antennis pedibusque gracilibus; alis brevibus.

♂. Long. 4, lat. pone medium 2 m. m.

Belongs to section *e* of Stål's 'Enumeratio,' and is remotely allied to *S. coxalis*, Stål.

Sparingly in wet moss in one place on the mountains near the "Pali."

**Nabidæ.**26. *Nabis Blackburni*, n. sp.

*N. elongato-oblongus*, griseo-testaceus, parce pallido-pubescens; capite vitta medio latiore, pronoto cicatriculis anticis vittulaque disci longitudinali, in collo latiore quam in lobo postico et in lobo antico fere geminata, fusco-nigris; lobo postico pronoti utrinque striis 3 subobliquis obsolete fusciscentibus, exterioribus angulum posticum versus distinctioribus; abdominis dorso nigro-fusco; capitis lateribus subtus, sterni vitta laterali et maculis in medio, ventrisque vitta lata laterali aliaque angustiore media nigris; antennis pedibusque corpori concoloribus, antennarum articulo secundo apice nigro, articulis duobus ultimis fusco-brunneis; femoribus maculis plurimis et lineolis transversis, tibiis punctis indistinctis, tarsorum articulis apice fusco-brunneis; elytris apicem abdominis paullo superantibus griseo-testaceis, costis dilutioribus irregulariter fusco-cinctis, interstitiis hinc inde

fusco-brunneo maculatis, corii vena exteriore maculis duabus nigro-fuscis; membrana griseo-hyalina venis latis permultis fuscis, basi extus puncto nigro notata; connexivo pallido stria interiore longitudinali sanguinea notato. Capite pronoto brevior; antennarum articulo primo capite brevior; femoribus anticis capite et pronoto simul sumptis brevioribus; pronoto postice sat fortiter ampliato, basi fere æque lato ac longa.

♂. Long.  $7\frac{1}{2}$ –8 m. m. Abdomen vix duplo longius quam latius.

Allied to *N. punctipes*, Reuter, but differing by its larger size, and in other respects as noted above.

Common amongst long grass in damp hollows on the higher mountains.

### Veliidæ.

#### 27. *Microvelia vagans*, n. sp.

*M. fusco-nigra*, pilis brevissimis fusco-brunneis densissime vestita; pronoti margine antico macula latera haud attingente, et margine postico, necnon connexivo (margine imo excepto) luteo-fulvis; antennarum articulis duobus primis fusco-brunneis, primo basi dilutiore et apice obscuriore; pedibus obscure fusco-brunneis, femoribus dimidio basali fusco-lutescentibus; capite utrinque ad oculos vitta angusta capillorum argenteorum instructo; elytris brunneo-fuscis, venis obscurioribus, maculis 5 vel 6 plus minus albidis notatis; corpore subtus nigro, pilis argenteis vestito.

♂ et ♀. Long. 3– $3\frac{1}{2}$ , lat. 1 m. m.

Not uncommon on running water.

XLII.—*Descriptions of new Species of Birds from the Island of Lifu, New Caledonia.* By E. L. LAYARD, C.B., H.B.M. Consul, Noumea, New Caledonia.

#### *Turdus Pritzbueri*, Layard, n. sp.

♂. Entire head, chin, throat, upper part of cheek very pale sepia; the whole of the rest of the body, above and below, very dark sepia, some of the feathers of the abdomen having paler sepia edges. Bill, feet, and legs pale yellow.

♀ like the ♂, but the crown of the head and lower portion of the chest brownish, and general colour of body not so dark.

*Juv.* Top of the head brown, spotted with rufous; underparts deep rufous, spotted and irregularly marked with small broken bars of dark sepia.

♂. Length 8", wing 3" 7"', tail 3" 3"', tarsi 1" 2"'·25, bill 13"'

*Hab.* Lifu, New Caledonia.